

What is claimed is:

1. An optical module mating with an optical connector that includes an optical fiber, comprising:

an optical sub-assembly having a head portion, said optical sub-
5 assembly including an optical semiconductor device therein;
an optical receptacle having a cavity for receiving said optical connector and a space for receiving said optical sub-assembly; and
an elastic member disposed between said optical receptacle and said optical sub-assembly,
10 wherein said elastic member enables said head portion of said optical sub-assembly to displace within said cavity.

2. The optical module according to claim 1,
wherein said receptacle includes a groove in an inner wall surface
15 thereof, said groove having a front surface and a rear surface, and said optical sub-assembly includes a flange in an outer surface thereof, and
wherein said flange and said elastic member is disposed within said groove such that said elastic member is sandwiched between said flange and said front surface of said groove.

20 3. The optical module according to claim 2, further comprises a bracket disposed between said flange and said rear surface of said groove;
wherein said bracket aligns said optical sub-assembly with said optical receptacle.

25 4. The optical module according to claim 3, wherein said elastic member

is an O-ring.

5. The optical module according to claim 3, wherein said elastic member comprises a ring portion and a plurality of limb portions extending from said ring portion to an inside thereof and warping from said ring portion, said
5 plurality of limb portions being in contact with said front surface of said groove and said ring portion being in contact with said flange.

6. The optical module according to claim 1,
10 wherein said receptacle further includes a groove in an inner wall surface thereof and said optical sub-assembly further includes a groove in an outer surface thereof, said groove of said optical sub-assembly having a front groove surface and a rear groove surface, and
said optical module further includes a bracket disposed in said groove of
15 said optical receptacle, said bracket being in contact with said front groove surface of said optical sub-assembly and said elastic member being disposed between said rear groove surface of said optical sub-assembly and said bracket.

7. The optical module according to claim 6, wherein said elastic member
20 is an O-ring.

8. The optical module according to claim 1, further includes a partition wall for dividing said cavity from said space, and said optical sub-assembly further includes a flange in an outer surface thereof,
25 wherein said head portion protrudes to said cavity by passing through said partitioning wall, and said elastic member is disposed between said

partition wall and said flange.

9. The optical module according to claim 1,

wherein said optical sub-assembly further includes an sleeve and a

5 coupling fiber optically coupled to said optical semiconductor device,

wherein said optical connector includes a ferrule securing said optical
fiber therein, and

wherein said optical fiber secured in said optical connector is physically
in contact with said coupling fiber when said ferrule of said optical connector
10 mates with said sleeve of said optical sub-assembly.